

On the identity of *Iontha acerces* A. E. Prout (Lepidoptera, Noctuidae), with description of a new species of *Iontha* Doubleday from Borneo

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Abstract Following a synthetic overview of the taxonomic problems involving the genus *Iontha* Doubleday, *Iontha silvani* sp. nov., a species similar to *Iontha acerces* A.E. Prout, is described from Borneo. The male of the new species is easily distinguishable from congeners by the short abdomen, heavily pectinated antennae and characteristics of the genitalia.

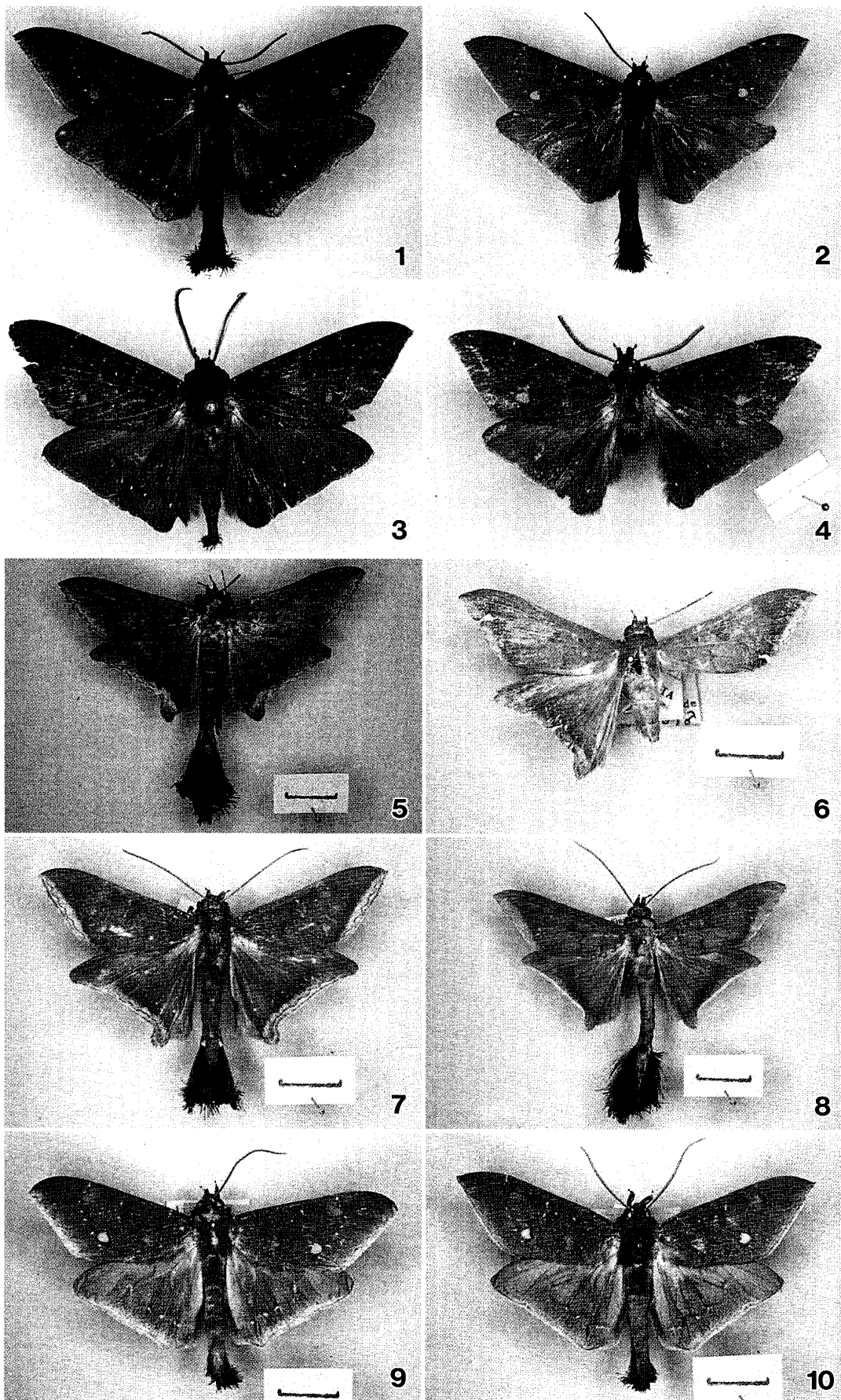
Key words *Iontha*, Noctuidae, Catocalinae, new species, South East Asia.

Introduction

According to Holloway (1982) and Poole (1989) three species are currently recognised within the genus *Iontha* Doubleday, 1842, namely *Iontha umbrina* Doubleday, 1842, *I. ida* Banks, 1919, and *I. acerces* A. E. Prout, 1928.

Male representatives from this genus are generally characterised by the extremely long and distally tufted abdomen, greatly exceeding the posterior margin of the hindwings, and the produced anal angle of the hindwings, usually in the shape of a short tail. The females seem to be very rare and little represented in collections, and show a habitus closely matching those of the genus *Platyja* Hübner, 1823. Further research should therefore be addressed to ascertain whether or not *Iontha* represents an offshoot of *Platyja* characterised by extreme sexual dimorphism, as envisaged by Tams (1924) and Joannis (1929), so as to leave the current concept of *Platyja* substantially paraphyletic. In this respect it is worth noting that inspected species of *Iontha* and *Platyja*, including *Iontha umbrina* Doubleday, 1842 and *Phalaena Noctua umminia* Cramer, 1780, type species of the genera, share in the male sex the same peculiar tripectinate antennal structure.

Iontha umbrina (Figs 6–8) is a widespread but fairly uncommon species occurring in Bangladesh and Assam (nominate *umbrina*), Vietnam (Joannis, 1929), Hainan (Chen, 1999), and from Peninsular Malaysia to Java, Bali, Borneo and Sulawesi (Swinhoe, 1904; Barlow, 1982). Sundanian populations were noted by Holloway (1982) as *I. umbrina rufiscripta* (Swinhoe, 1904) on consideration that *Platyja rufiscripta* Swinhoe, 1904 (type locality: Sarawak, Paku; Singapore) was a nominal taxon originally based on females of *umbrina*, as already put forward by Tams (1924) and Joannis (1929). According to Holloway (1982), the only difference between the two subspecies would be the absence of faint blue dusting at the margins of both wings in males from Sundaland. Male specimens from this area show also slightly more slender wings, but they agree closely with those from Sylhet and the Khasis. As specimens from Sulawesi are a little larger with longer tornal tails, the status of populations from this island should be checked. In addition to the distinctly produced anal angle of the hindwings, the male of *umbrina* shows the characteristically long and tufted abdomen. Nevertheless, old illustrations of *umbrina*, including the original one (Doubleday, 1842; Hampson, 1894), depict specimens without a distinct tail at the hindwing, but examination of the type of *umbrina* from Sylhet (in Natural History Museum, London) confirmed that



indeed it has short tails (Fig. 6).

Iontha ida (Fig. 5) is a well characterised species so far known only from the Philippines (*cf.* Banks, 1919; Holloway, 1982), also showing long abdomen and tails in the male sex, which bears a peculiar series of parallel sclerotised plates on the aedeagus vesica.

Iontha acerces (Figs 1, 9–10) was described by Prout (1928) on the basis of two males from Sumatra and further recorded from Java (Roepke, 1951) and Borneo (Holloway, 1976, 1982; Sugi, 1982), and there is general agreement that it is a species only “slightly tailed” (Holloway, 1982). Nevertheless, the need to identify a specimen with long abdomen and without evident tails from Peninsular Malaysia (Fig. 2) firstly required assessment of the identity of *I. acerces*, as information on the features of this nominal species was unclear. For example, Prout (1928) stated that *acerces* has the abdomen like *umbrina*, although with a much shorter and different tuft, while Holloway (1982) stressed that it is the abdomen itself which is short and extends just beyond the hindwings.

Results

Owing to the courtesy of the Natural History Museum of London, the type material of *acerces*, *i. e.* two males labelled ‘North Korintji Valley, 5,000 ft, S. W. Sumatra, Sept–Oct 1921, C., F. & J. Pratt’, was located. Despite the fact that the specimens are labelled, respectively, as type and paratype, they have to be regarded as syntypes in accordance with articles 73.1. and 73.2. of the Code (ICZN, 1999). Examination of the syntypes of *acerces* and further material preserved in some public and private collections demonstrated that there are at least two species of *Iontha* devoid of tails at the hindwings, respectively with and without long and tufted abdomens.

Iontha acerces is a species with long abdomen and shortly pectinated antennae so far known with certainty from Sumatra (Figs 1, 9–10), and probably occurring in Java (Roepke, 1951) and Borneo (*cf.* Sugi, 1982: 20, fig. 2).

Another undescribed species, seemingly corresponding with Holloway’s (1976, 1982) concept of *acerces*, is from Borneo. It is characterised by the smaller size, short abdomen that barely extends beyond hindwings, vestigial tuft and heavily pectinated antennae (Figs 3–4).

The single male specimen examined from Peninsular Malaysia agrees in many respects with typical *acerces* from Sumatra, but shows the abdomen even longer and conspicuous differences in the genitalia, above all the apical processes of valva, uncus, and distal lobe of vesica (Figs 2, 14, 18). Should these differences be confirmed after examination of supplementary material, the existence of a third untailed species of *Iontha* would be proven. It is very likely that it represents a mainland vicariant of *acerces*, but this circumstance could lead to critical reconsideration of Sugi’s (1982: 20, fig. 2) illustrated specimen of *acerces* from Borneo, as its abdomen more closely approaches in length the continental specimen (Fig. 2)

Figs 1–10. *Iontha* spp. 1. *I. acerces* A. E. Prout, ♂, Sumatra, Siantar, ZSM; wing span 65 mm. 2. Species near *acerces*, ♂, Malaysia, Genting Highlands, MCZ; wing span 61 mm. 3–4. *I. silvani* sp. nov. (3. Holotype, ♂, Sarawak, Mt Api, NHM; wing span 51 mm. 4. Paratype, ♂, Sabah, Mt Kinabalu, PC; wing span 48.5 mm). 5. *I. ida* Banks, ♂, Philippines, Mindanao, Klambuzau, NHM. 6–8. *I. umbrina* Doubleday (6. Holotype, ♂, [Bangladesh], Sylhet, NHM. 7. ♂, [India, Assam], Khasia, NHM. 8. ♂, Singapore, NHM). 9–10. *I. acerces* A. E. Prout, syntypes, ♂, [Indonesia], Sumatra, North Korintji Valley, NHM.

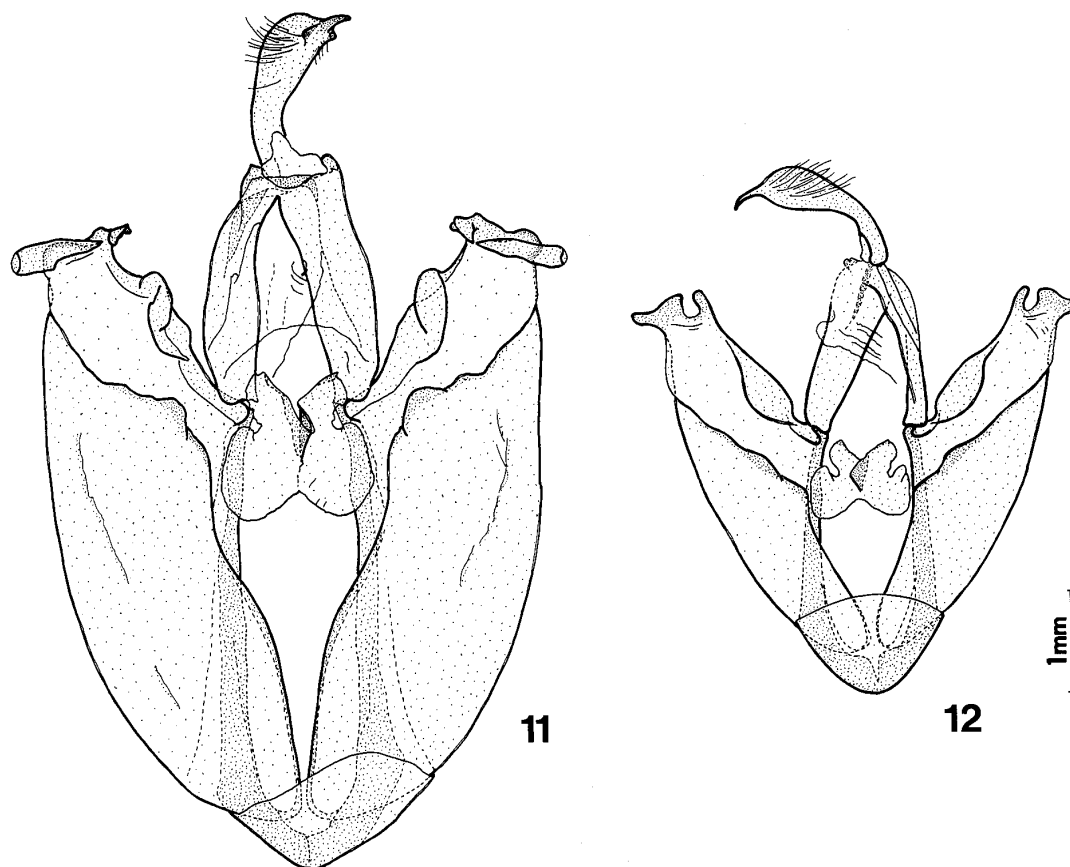
than Sumatran *acerces* (Fig. 1), including types of the latter.

Last but not least, Wang (1995: 136) illustrates a Taiwanese male specimen closely matching with the small Bornean species. Judging from the figure, its antennal pectinations are very short, a fact which would therefore be in accordance with the presence of another species in the group.

This rather complex situation is further complicated by mounting evidence indicating that females of *Iontha* remain actually overlooked within *Platyja*. Theoretically, a number of female-based names of *Platyja* might enter into synonymy with male-based names of *Iontha* and, occasionally, even take priority. Nevertheless, the impossibility of comfortably associating males and females without unambiguous observations in the field definitely hampers achievement of a satisfactory taxonomic arrangement of the group as a whole. As a matter of fact, Sugi (1982) came to a conclusion contrary to Holloway's (1982) on the association between *P. rufiscripta* and *I. umbrina*, and suggested that *rufiscripta* is the female of *acerces*, and that the true female of *umbrina* is *Platyja crenulata* Holloway, 1976.

In order to resolve this puzzling situation and provide a basis for a definitive association between males and females it is first desirable to assess the actual number of species involved and define their morphological characteristics. Accordingly, the small-sized species from Borneo, most clearly differentiated from *acerces*, is here formally described, and features of the specimen from Peninsular Malaysia close to *acerces* are illustrated (Figs 2, 14, 18).

Abbreviations and symbols for material depositories and figures are as follows.



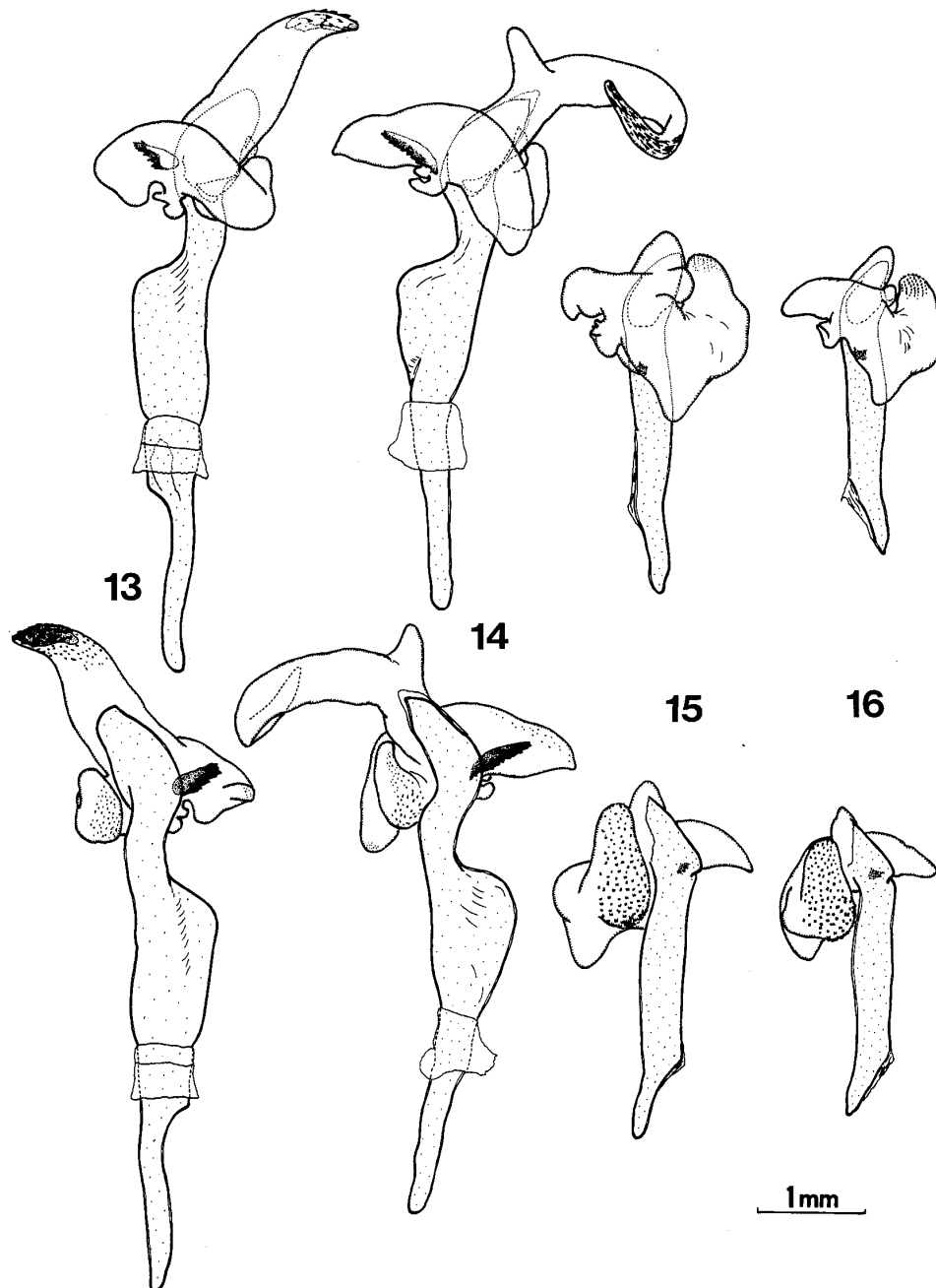
Figs 11–12. Male genitalia of *Iontha* spp. (aedeagus omitted). 11. *I. acerces* A. E. Prout, Sumatra, Siantar. 12. *I. silvani* sp. nov., holotype, Sarawak, Mt Api, NHM.

MCZ: Museo Civico di Zoologia, Rome.

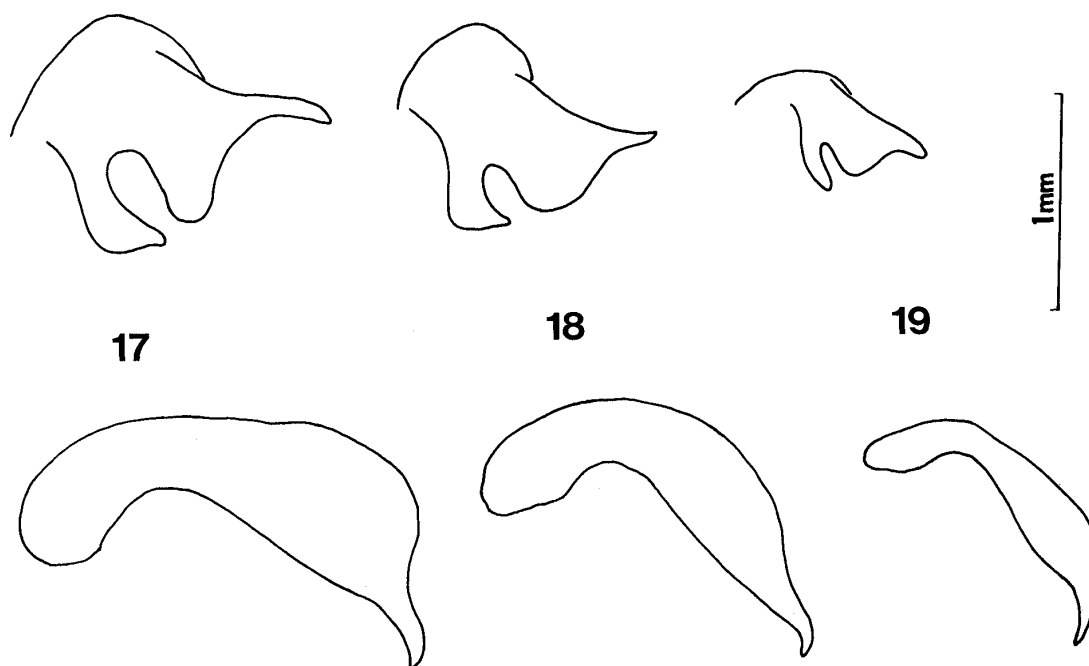
NHM: Natural History Museum, London.

PC: Provera collection, Rome.

ZSM: Zoologische Staatssammlung, München.



Figs 13-16. Aedeagi of *Iontha* spp. 13. *I. acerces* A. E. Prout, Sumatra, Siantar. 14. Species near *acerces*, Malaysia, Genting Highlands. 15-16. *I. silvani* sp. nov. (15. Holotype, Sarawak, Mt Api, NHM. 16. Paratype, Sabah, Mt Kinabalu, PC).



Figs 17–19. Variability of terminal edge of right valva (as seen from above) (top) and uncus (lateral view) (bottom) between *Iontha* spp. 17. *I. acerces* A. E. Prout, Sumatra, Siantar. 18. Species near *acerces*, Malaysia, Genting Highlands. 19. *I. silvani* sp. nov., paratype, Sabah, Mt Kinabalu, PC.

Description of the new species

Iontha silvani sp. nov. (Figs 3–4, 12, 15–16, 19)

Diagnosis. A species of *Iontha* Doubleday, 1842 wing-shaped and patterned like *I. acerces* A. E. Prout, 1928 characterised in the male sex by smaller size, longer rami of antennae, those from the middle of the flagellum being approximately 1.5 times longer than in *acerces*, and short abdomen, just extending beyond anal angle of hindwings and without a conspicuous apical tuft. Male genitalia differ from those of *acerces* by the smaller size, shape of apical processes of valva, uncus, and aedeagus, and the configuration and ornamentation of vesica.

Holotype. ♂, [Malaysia] Sarawak, Gunong [=Mount] Mulu National Park, Gunong Api, Pandanus Camp, 1,500 m, iv. [1977–1978] (J.D. Holloway *et al.*), NHM. Paratype. 1 ♂, Sabah, Gunong Kinabalu, 1,600 m, 31. iii. 1983 (A. Loi & P. Provera), PC.

Male. Length of forewing 24–25 mm. Habitus closely corresponding with that of male *acerces*, but forewings more compact, tripectinate antennae (*viz.* bearing paired rami and mesial tooth per antennomere) with long rami, and abdomen extending little beyond hindwings with nearly vestigial distal tuft (Figs 3–4). Head, thorax, abdomen, and background colour of wings varying from dark brown to blackish brown. Labial palpus with third segment whitish at middle and yellowish at its very tip. Forewing with reddish speckle in inner median field below CuA₂, vaguely defined dark stigma at discocellular, faint reddish suffusion on inner edge of superior part of postmedial line, and chestnut speckle between CuA₁ and CuA₂ on inner edge of postmedial; postmedial line nearly obsolete, gently waved superiorly with series of small white dots on veins; cilia basally dark brown, distally whitish. Hindwing postmedial consisting of small white dots on more posterior veins; cilia distally

purser white than in forewing. Underside uniformly dark or blackish brown with white or whitish markings consisting of small dots on postmedial of both wings, light suffusion on hindwing, cilia, 'V'-shaped collar made of scales from foretarsus and pectus, and junctions between tarsal segments. Tibiae densely clothed with compact scales, those of hindtibia forming a small dorsal crest reaching second tarsal segment.

Male genitalia (Figs 12, 15–16, 19). Armature *acerces*-like (*cf.* Fig. 11), but much smaller (Fig. 12). Valva with bifid terminal edge, small inner process finger-like when seen from above, not securiform (Fig. 19); superior border of juxta with sharp incisure in the middle and pointed lateral plates; uncus basally slender, swollen at middle, terminating in a long hook. Aedeagus tubular, without flattened mesial part, vesica without elongate diverticulum projecting distally (*cf.* Fig. 13) and consisting of a transverse 'zig-zag' sack bearing smaller lobes, with one terminal end scobinate due to small square shaped spiculae (Figs 15–16). Variability occurs as to degree of swelling of uncus (Figs 12, 19).

Female. Unknown.

Etymology. The species is named after the author's cousin Silvano Valletta, a civil pilot who died before his time, in the hope that in this way he could fly forever.

Geographical range. So far known from the North-West of Borneo. Interestingly, Wang (1995) illustrates a closely matching specimen from Taiwan, but the actual length of the antennal pectinations seem very much reduced.

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摘 要

ボルネオ産コウモリクチバの1新種と *Iontha acerces* A. E. Prout の同定について (Alberto Zilli)

コウモリクチバ属 (*Iontha* Doubleday, 1842) は *I. umbrina* Doubleday, 1842, *I. ida* Banks, 1919 および *I. acerces* A. E. Prout, 1928 の3種が知られる。これらの♂は後翅外縁が多少ともえぐれ、内縁に尾突を生じる。*I. umbrina* と *I. ida* では特にこの特徴が顕著であるが、本報ではこの特徴がさほど著しくない *I. acerces* と、これに近縁な1新種、*I. silvani* Zilli について記した。

I. acerces A. E. Prout は元来スマトラより記載され、後翅よりはるかに長い腹部と腹端の長毛および短い触角の鋸歯で特徴付けられる。スマトラの他、ジャワ、ボルネオにも分布する。一方、ボルネオには、小型で腹部もわずかに後翅を超える程度の未記載種を産し、こちらの種では腹端の毛束もあまり発達せず、また触角は強く櫛歯状を呈する。また、マレー半島には、スマトラの *acerces* とそっくりながら、♂交尾器に違いを生ずるものがあり、さらに台湾には、ボルネオの小型種によく似るものの、触角の櫛歯が非常に短い種も産する。従って、尾突のあまり発達しないコウモリクチバは、最終的には4種に分類されることになるかも知れない。

属 *Iontha* では、こうした種の解析の問題の他、対応する♀が全く別の属 *Platyja* の中に見落とされたままになっている可能性も指摘されている。例えば、*I. umbrina* と *Platyja rufiscripta* Swinhoe, 1904 が雌雄関係ではないかとか、*I. acerces* の♀が実は *P. rufiscripta* で、*I. umbrina* の♀が *P. crenulata* Holloway, 1976 ではないかといった意見がある。命名年のやや古い *P. rufiscripta* (syntypes の産地はボルネオとシンガポール) が今回の尾突のあまり発達しないコウモリクチバの方に関わってくると、新種 *silvani* はもとより、*acerces* の学名にも影響する可能性がある。しかし、雌雄関係の確定は綿密な野外調査に待たねばならないし、実際にこの群に何種いるのか分からなければ、雌雄関係の問題も解決できない。本報ではひとまずボルネオの小型種を新種、*Iontha silvani* として記載するとともに、マレー半島の *acerces* 似の個体を図示し、その特徴を簡単に記した。

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